

Appl. No. 09/615,978  
Amdt. Dated  
Proposed Reply to Office action of Feb. 23, 2004

**PROPOSED RESPONSE FOR DISCUSSION  
PURPOSES ONLY/NOT FOR FILING**

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claim 1 (currently amended) A disposable absorbent article comprising:

a topsheet;

a backsheet; and

an absorbent core disposed therebetween;

wherein said absorbent core is constructed of an absorbent composite

including

an absorbent layer of hydratable fine fibers in the form of microfibril obtained from cellulose or a derivative thereof, and super absorbent polymer (SAP) particles bonded together by said hydratable fibers, a coating of mineral oil over the SAP particles of the absorbent layer, said coating being adapted to retard the initial receipt of liquid by the SAP in the absorbent layer; and

a nonwoven substrate supporting said absorbent layer, said absorbent layer being coated thereupon; and

a pair of longitudinally-extending, upstanding cuffs spaced laterally from said core, each said cuff including a folded portion of said topsheet and a longitudinally-extending absorbent composite secured within said folded portion, said longitudinally-extending absorbent composite including an absorbent layer of hydratable fine fibers in the form of microfibril obtained from cellulose or a derivative thereof, and super absorbent polymer (SAP) particles bonded together by said hydratable fibers, and a nonwoven substrate supporting said absorbent layer, said absorbent layer being coated thereupon;

wherein said core includes said first absorbent composite; and

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wherein said first absorbent composite and said longitudinally extending absorbent composites of said cuffs are swellable sections of one continuous absorbent composite structure positioned about a crotch region of said article; and

wherein said absorbent layer includes a low cross link SAP adapted to gel block upon wetting such that said backsheet is substantially impervious when wet and said backsheet is breathable when dry; and

wherein said SAP are water-swallowable particles included in a concentration in the range of about 50 g/m<sup>2</sup> to about 500 g/m<sup>2</sup>.

Claim 2 (canceled)

Claim 3 (canceled)

Claim 4 (canceled)

Claim 5 (currently amended) The article of claim [[2,]]1, wherein said nonwoven substrate is a section of said topsheet.

Claim 6 (canceled)

Claim 7 (canceled)

Claim 8 (original) The absorbent article of claim 1, wherein said absorbent core includes a prefabricated sheet of said absorbent composite.

Claim 9 (original) The absorbent article of claim 8, wherein said absorbent composite of said core includes a plurality of said absorbent layers, said layers

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being spaced apart from one another such that non-coated surface sections of said substrate are exposed therebetween.

Claim 10 (original) The absorbent article of claim 9, wherein said non-coated surface sections form wicking zones between said absorbent layers.

Claim 11 (canceled)

Claim 12 (canceled)

Claim 13 (original) The absorbent article of claim 1, wherein said absorbent composite forms said backsheet and said core, said backsheet having a section providing said nonwoven substrate and said absorbent layer being concentrated at a crotch region of said backsheet to form said absorbent core.

Claim 14 (canceled)

Claim 15 (original) The absorbent article of claim 1, wherein said absorbent composite further includes a concentration of pulp material, said absorbent layer and said nonwoven substrate forming a sheet disposed about said pulp concentration such that said pulp concentration is disposed between at least two layers of said sheet of absorbent layer and nonwoven substrate.

Claim 16 (original) The absorbent article of claim 1, wherein said absorbent composite forms at least a portion of said topsheet and said absorbent core, said topsheet having a section providing said nonwoven substrate and said absorbent layer forming said core.

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Claim 17 (original) The absorbent article of claim 1, wherein said absorbent layer includes low-cross link, low gel strength SAP having free swell capacities of over 40 g/g and such that said absorbent layer is adapted to gel block upon wetting so as to be substantially impervious but is breathable when dry.

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Claim 18 (currently amended) A disposable absorbent article comprising:

- a topsheet;
- a backsheet;
- a pair of longitudinally-extending upstanding cuffs, each cuff having two sheet layers;

[[an]] a continuous absorbent composite including

- an absorbent layer of hydratable fine fibers in the form of microfibril obtained from cellulose or a derivative thereof, and absorbent polymer (SAP) particles bonded together by said hydratable fibers, and
- a nonwoven substrate supporting said absorbent layer, said absorbent layer being coated thereupon; and

wherein said absorbent layer is disposed between the topsheet and backsheet, and generally centrally at a location identified as a crotch region, said absorbent layer providing [[an]] a swellable absorbent core for absorbing bodily exudates received in said crotch region; and

wherein said cuffs are spaced laterally from said absorbent core, and wherein said absorbent composite includes two swellable longitudinally-extending composite sections extending upwardly from the crotch area into the cuffs and between the cuff layers, said absorbent composite forming an absorbent structure about the crotch region; and

wherein said SAP are water-swellaible bodies included in a concentration of about 20 gsm and said nonwoven substrate is [[an]] a spunbond/meltblown/spunbond (SMS) having a basis weight in the range of about 10 gsm to 60 gsm[[.]]; wherein each of said absorbent layer and two longitudinally-extending composite sections forms a distinct swellable SAP section of said continuous absorbent composite, said absorbent composite being folded between said absorbent layer and each

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said longitudinally extending composite sections to form a substantially non-swellable intersection therebetween.

Claim 19 (original) The article of claim 18, wherein said absorbent layer is supported underneath a section of said topsheet, such that said section of said topsheet provides said nonwoven substrate of said absorbent composite.

Claim 21 (canceled)

Claim 22 (original) The article of claim 18, wherein said absorbent layer is supported on said backsheet, such that a section of said backsheet provides said nonwoven substrate of said absorbent composite.

Claim 23 (previously presented) The article of claim 18, wherein said absorbent layer includes a low cross link SAP adapted to gel block upon wetting such that said backsheet is substantially impervious when wet and said backsheet is breathable when dry.

Claim 24 (canceled)

Claim 28 (original) The absorbent article of claim 18, wherein said absorbent composite further includes a concentration of pulp material, said absorbent layer and said nonwoven substrate forming a sheet disposed about said pulp concentration such that said pulp concentration is disposed between at least two layers of said sheet of absorbent layer and nonwoven substrate.

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Claim 30 (currently amended) In a disposable absorbent having an absorbent core disposed between a topsheet and a backsheet, a prefabricated absorbent composite comprising:

an absorbent layer of hydratable fine fibers in the form of microfibril obtained from cellulose or a derivative thereof, and absorbent polymer (SAP) particles bonded together by said hydratable fibers, and

a nonwoven substrate supporting said absorbent layer, said absorbent layer being coated thereupon;

wherein said absorbent layer is disposed between the topsheet and backsheet, and generally centrally in the article at a location identified as a crotch region, said absorbent layer providing an absorbent core for absorbing bodily exudates received by the crotch region; and

wherein the article includes a pair of longitudinally-extending, upstanding cuffs spaced laterally from said absorbent core, each cuff having two sheet layers, and wherein said absorbent composite includes two longitudinally-extending composite sections extending upwardly from the crotch region into the cuffs and between the cuff layers, said absorbent composite forming an absorbent structure about the crotch region; and

wherein said absorbent layer includes a low cross link SAP adapted to gel block upon wetting such that said backsheet is substantially impervious when wet and said backsheet section is breathable when dry[.]; and

wherein each said longitudinally-extending composite sections and said absorbent core is a distinct swellable section of one continuous absorbent composite structure positioned about the crotch region, said continuous absorbent structure including folds providing an interface between each longitudinally-extending composite section and said absorbent core, each said fold being further provided with non-SAP coated bands to restrict swelling therearound.

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Claim 31 (original) The absorbent composite of claim 30, wherein said absorbent layer is supported underneath a section of the topsheet, such that said section of topsheet provides said nonwoven substrate of said absorbent composite.

Claim 32 (canceled)

Claim 33 (original) The absorbent composite of claim 30, wherein said absorbent layer is supported on a section of the backsheet, such that said backsheet section provides said nonwoven substrate of said absorbent composite.

Claim 34 (canceled)

Claim 35 (currently amended) The absorbent composite of claim ~~34~~ 30, wherein said low cross-link SAP is low-gel strength SAP characterized by a free swell capacity greater than about 40 g/g.

Claim 36 (original) The absorbent composite of claim 30, wherein said SAP are water-swellaable bodies included in a concentration of about 50 gsm to 500 gsm.

Claim 37 (canceled)

Claim 38 (original) The absorbent composite of claim 30, further comprising a coating of mineral oil over the SAP particles of the absorbent layer, said coating being adapted to retard the initial receipt of liquid by the SAP in the absorbent layer.



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Claim 39 (currently amended) A disposable absorbent article comprising:  
a topsheet;  
a backsheet;  
a pair of longitudinally-extending upstanding cuffs, each cuff having two  
sheet layers;

[[an]] a continuous prefabricated sheet of absorbent composite including  
an absorbent layer of hydratable fine fibers in the form of microfibril  
obtained from cellulose or a derivative thereof, and absorbent polymer (SAP) particles  
bonded together by said hydratable fibers, wherein said cuffs are spaced laterally from  
said absorbent core, and wherein said absorbent composite includes two longitudinally-  
extending swellable composite sections extending upwardly from the crotch area into the  
cuffs and between the cuff layers, said absorbent composite forming an absorbent  
structure about the crotch region, and

a nonwoven substrate supporting said absorbent layer, said absorbent layer  
being coated thereupon; and

wherein said absorbent layer is disposed between the topsheet and  
backsheets, and generally centrally at a location identified as a crotch region, said  
absorbent layer providing an absorbent core for absorbing bodily exudates received in  
said crotch region; and

wherein said composite sections, includes low-cross link, low gel strength  
SAP having free swell capacities of over 40 g/g and such that said absorbent composite  
sections are adapted to gel block upon wetting so as to be substantially impervious but is  
breathable when dry and such that each said composite sections is swellable within said  
cuffs upon wetting[.]; and

wherein said absorbent composite is folded to form a non-swellable  
interface between said absorbent core and each said composite sections, said interface  
being provided by a non-SAP coated band.

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Claim 40 (new) The disposable absorbent article of claim 1, wherein said absorbent composite is folded to form a non-swellable intersection between said absorbent core and each said longitudinally-extending absorbent composites, said intersection being provided by a non-SAP coated band.

Claim 41 (new) The disposable absorbent article of claim 18, wherein said intersections are non-swellable bands provided by a non-SAP coated band.